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METHOD FOR PRODUCTION OF A PIGMENT GRANULATE, AS WELL AS PIGMENT
GRANULATE AND ITS USE

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(57) Abstract: The invention relates to granular pigments and methods for producing such granular pigments according to the generic part of claims 1, 4, or 16. In a first embodiment of the invention, the ingredients that are provided in the form of particles and the dispersant particles which are provided in the form of at least one cellulose-containing material are mixed in an essentially homogeneous manner in a dry or moist state and are then pressed into granular pigments in a dry or moist state in order to produce a granular pigment in a dry or semidry manner in such a way that the granular pigment quickly disperses and the particles of the ingredients are released after being introduced into the liquid. Alternatively, a suspension can be produced from the particles and be spray-dried or a fluid bed-dried, whereby the granular pigment is obtained.

Technical field

The present invention concerns a method for production of pigment granulates, as well as pigment granulates and their use, according to the preambles of Claims 1, 7 or 17.

Pigments according to the invention are solid particles that are practically insoluble in the aqueous application medium. There are different pigments that are used in aqueous systems, like titanium dioxide, iron oxide, cement, gypsum, etc. (ingredients). Consequently, these "pigments" need not necessarily be dyes.

Such pigments have a tendency toward dust formation. The metering is based on the poor flow and/or trickling properties and the tendency toward bridge formation in the metering unit is extremely troublesome.

Prior art

Iron oxide granulates prepared by means of water-soluble binders are already state of the art. The binder is dissolved in the aqueous medium and releases iron oxide, so that it is dispersed in the aqueous medium. Preparation of such granulates is cost-intensive and occurs in a moist medium. They can be easily metered, and also have no tendency toward dust formation.

Statement of the problem

The underlying problem of the invention is to economically produce a pigment granulate, so that it is particularly effective, i.e., so that the pigment granulate, after introduction to the liquid, is rapidly redispersed and the particles of the ingredients are quickly released.

This problem is solved by the invention stated in Claims 1, 7 and 17. Advantageous modifications of the invention are apparent from the dependent claims.

Claims 1 and 7 are alternative variants of the invention: Claim 1 is geared toward a dry or essentially dry work method in the production of the pigment granulate; in Claim 17 the particles are mixed into a liquid and form a suspension with it that can be spray-dried or dried with a fluidized bed.

Two contradictory requirements are imposed on pigment granulates: mechanical stability and rapid, complete redispersal of the particles of the ingredients.

Both requirements can be met by using a cellulose-containing material as a dispersant. Cellulose-containing materials have been shown to be a very good dry binder and ensure the appropriate stability. In the production of granulates, an energy-intensive drying step is therefore eliminated. Both the particles of the ingredients and the particles of the dispersant, and also the material mixture fed to granulation, can likewise have a certain intrinsic moisture of up to 25-30 wt%, referred to the dry weight.